

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Application	)	
No. UNKNOWN	)	For: Method and System for Increased
	)	Bandwidth Efficiency in Multiple
	)	Input- Multiple Output Channels
John W. Ketchum	)	
	)	
Examiner: UNKNOWN	)	
	)	
Filed: HEREWITH	)	Group No. UNKNOWN

**INFORMATION DISCLOSURE STATEMENT  
UNDER 37 CFR § 1.97**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Commissioner:

Applicant through their attorney submit herewith, in accordance with 37 CFR §1.98, a list references of which they are aware, which they believe may be material to the examination of this application and with respect to which there may be a duty to disclose in accordance with 37 CFR § 1.56.

**CERTIFICATE OF MAILING/TRANSMISSION (37 CFR 1.8(a))**

I hereby certify that this correspondence is, on the date shown below, being:

**MAILING**

- ☒ deposited with the United States Postal Service with sufficient postage as Express mail, in an envelope addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Depositor's Name: Christine Hughey  
(type or print name)

Date: 03/26/2004

Signature: \_\_\_\_\_



**FACSIMILE**

- ☐ transmitted by facsimile to the Patent and Trademark Office.

Depositor's Name: \_\_\_\_\_  
(type or print name)

Date: \_\_\_\_\_

Signature: \_\_\_\_\_

Some of these documents have been previously submitted in the allowed U.S. application serial no. 09/737,602 filed January 05, 2001 entitled, "Method and System for Increased Bandwidth Efficiency in Multiple Input- Multiple Output Channels," and currently assigned to the assignee of the present application.

While the references identified herein may be material to the examination of this application pursuant to 37 CFR § 1.56, the citation of these references is not intended to constitute an admission that any reference referred to herein is prior art to the invention of this application unless specifically designated as such.

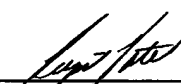
The filing of this document shall not be construed to mean that any search has been made or, that if made such search was complete or exhaustive, or that no other material information as defined in 37 CFR § 1.56 exists.

A list of the references cited herein is set forth on Form PTO-1449 which is enclosed herewith. In accordance with 37 CFR § 1.98(d) Applicants are not required to submit copies of the references and accordingly have not provided copies herewith. Applicants respectfully request that the Examiner return to Applicants the enclosed copy of the Form PTO-1449 indicating consideration of the references.

The subject application is believed patentable over any of the above-references.

Respectfully submitted,

Dated: 03/26/2004

By:   
Rupit Patel, Reg. No. 53,441  
(858) 651-7435

QUALCOMM Incorporated  
5775 Morehouse Drive  
San Diego, California 92121  
Telephone: (858) 651-4404  
Facsimile: (858) 658-2502

FORM PTO-1449 U.S. DEPARTMENT OF COMMERCE (REV. 7-80) PATENT AND TRADEMARK OFFICE  INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use several sheets if necessary)</i>  DATE MAILED: 03/26/2004	ATTY. DOCKET NO.	APPLICATION NO.
	000252C1	UNKNOWN
	APPLICANT	
	JOHN W. KETCHUM	
	FILING DATE	GROUP
	HEREWITH	UNKNOWN

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL	Ref No	DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPRO- PRIATE
	A1	5,781,542 A	07/14/1998	SAITO TATSUNORI et al.			
	A2	6,574,211	06/03/2003	PADOVANI et al.			
	A3						
	A4						
	A5						
	A6						
	A7						
	A8						
	A9						
	A10						

## FOREIGN PATENT DOCUMENTS

EXAMINER INITIAL	Ref No	DOCUMENT NUMBER	DATE	COUNTRY	NAME	CLASS	SUB CLASS
	B1	WO 9708861A	03/06/1997	PCT	TERAYON CORPORATION		
	B2						
	B3						
	B4						
	B5						

## OTHER PRIOR ART (Including Author, Title, Date, Pertinent Page, Etc.)

	C1	"A Simple Transmit Diversity Technique for Wireless Communications," Almouti, IEEE Journal on Select Areas in Comm. Vol 16., No. 8, October 1998, pgs 1451-1458.
	C2	"Channel Coding with Multilevel/Phase Signals," Ungerboech, IEEE Transactions on Information Theory, Vol 11-28 No. 1, January 1982 pgs 55-67.
	C3	Thompson, J S et al., "Downlink Transmit Diversity Schemes for CDMA Networks," IEEE Proceedings: Communications, Institution of Electrical Engineers, GB, Vol. 147, no. 6, 11 December 2000.
EXAMINER		DATE CONSIDERED
*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.		

FORM PTO-1449 U.S. DEPARTMENT OF COMMERCE (REV. 7-80) PATENT AND TRADEMARK OFFICE  INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use several sheets if necessary)  DATE MAILED: 03/26/2004	ATTY. DOCKET NO.	APPLICATION NO.
	000252C1	UNKNOWN
	APPLICANT	
	JOHN W. KETCHUM	
	FILING DATE	GROUP
	HEREWITH	UNKNOWN

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL	Ref No	DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPRO- PRIATE
	A1	5,781,542 A	07/14/1998	SAITO TATSUNORI et al.			
	A2	6,574,211	06/03/2003	PADOVANI et al.			
	A3						
	A4						
	A5						
	A6						
	A7						
	A8						
	A9						
	A10						

## FOREIGN PATENT DOCUMENTS

EXAMINER INITIAL	Ref No	DOCUMENT NUMBER	DATE	COUNTRY	NAME	CLASS	SUB CLASS
	B1	WO 9708861A	03/06/1997	PCT	TERAYON CORPORATION		
	B2						
	B3						
	B4						
	B5						

## OTHER PRIOR ART (Including Author, Title, Date, Pertinent Page, Etc.)

	C1	"A Simple Transmit Diversity Technique for Wireless Communications," Almouti, IEEE Journal on Select Areas in Comm. Vol 16., No. 8, October 1998, pgs 1451-1458.
	C2	"Channel Coding with Multilevel/Phase Signals," Ungerboech, IEEE Transactions on Information Theory, Vol 11-28 No. 1, January 1982 pgs 55-67.
	C3	Thompson, J S et al., "Downlink Transmit Diversity Schemes for CDMA Networks," IEEE Proceedings: Communications, Institution of Electrical Engineers, GB, Vol. 147, no. 6, 11 December 2000.
EXAMINER		DATE CONSIDERED
*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.		